

Central Floodplain Risk Management Committee

Meeting Date: Wednesday, 10 April, 2024

Location: Jervis Bay Rooms, City Administrative Centre, Bridge Road, Nowra

Minutes Attachments

Index

| | | |
|---------|---|--|
| CFM24.1 | Lower Shoalhaven River & St Georges Basin Flood Evacuation Capability Assessment - Water Technology | |
| | Attachment 1 | Flood Evacuation Capability Assessment and Triggers - Water Technology3 |
| CFM24.2 | St Georges Basin Floodplain Risk Management Study & Plan Presentation - Rhelm | |
| | Attachment 1 | St Georges Basinn Floodplain Risk Management Study & Plan - Rhelm Presentation19 |



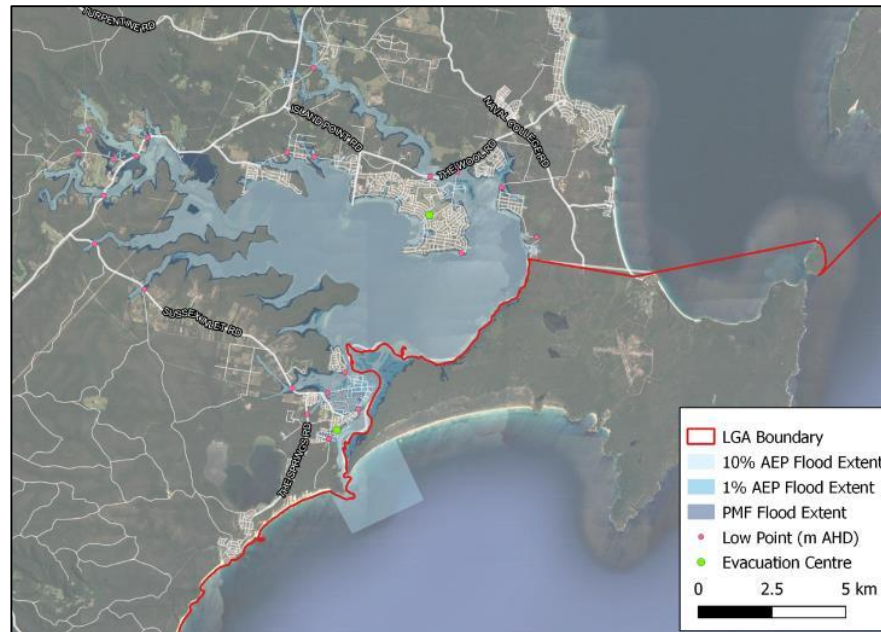
Flood Evacuation Capability Assessment and Triggers

Lower Shoalhaven River and St Georges Basin Catchments

I pay my respect to all First Nations peoples, their cultures and to their Elders, past and present

The Problem

The Lower Shoalhaven River and St Georges Basin catchments are home to several flood-affected towns, some of which are at serious risk of inundation and isolation during flood events. This poses a significant flood risk to property and life.



Project Objectives

- Identify flood evacuation constraints in the catchments and potential mitigation options
- Provide flood evacuation capability analysis to assist the NSW SES in planning for the safe evacuation of people
- Advise Council regarding land use planning considering evacuation capability

Project Scope

- Review available data + produce new data where required
- Assess evacuation capability
- Identify flood evacuation triggers and constraints
- Identify potential mitigation options
- Investigate the vulnerability of critical services
- Identify local needs to improve safety during isolation
- Review existing flood forecast and warning systems
- Advice on land use planning considering evacuation capability

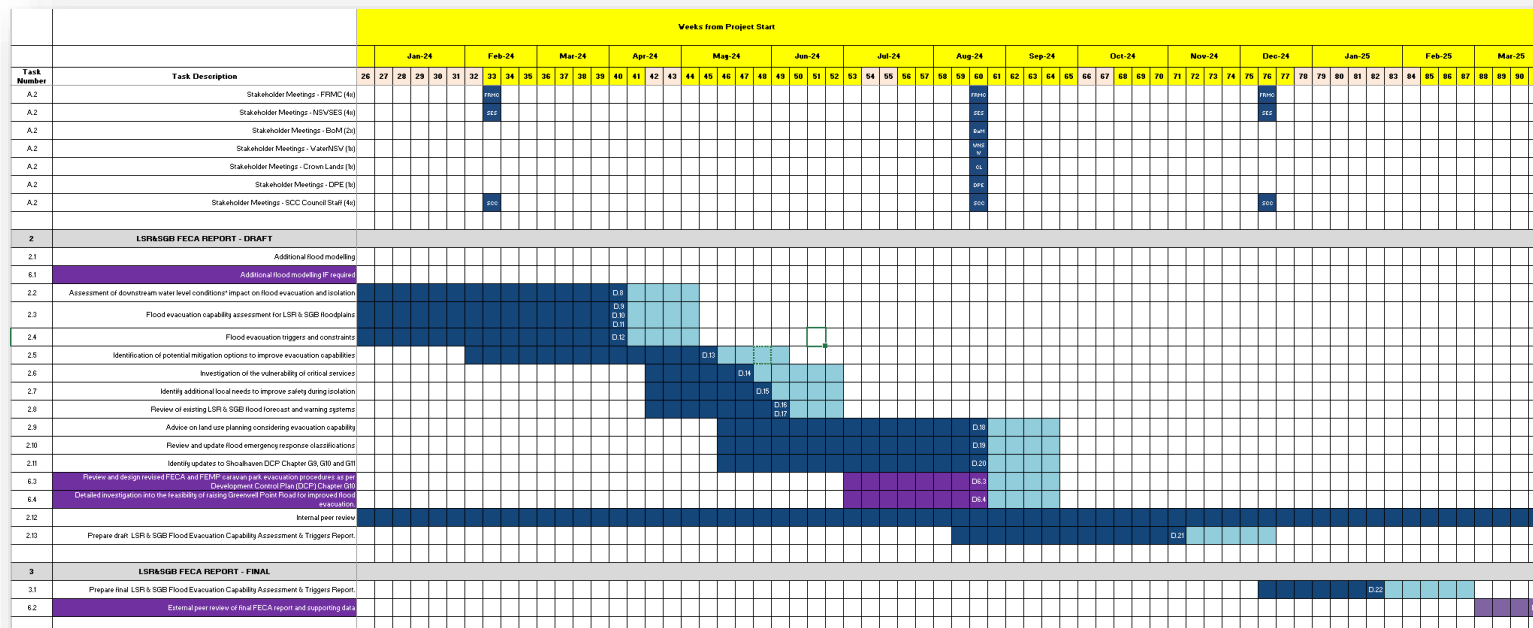
Deliverables and Progress

- Site visit inspection report ✓



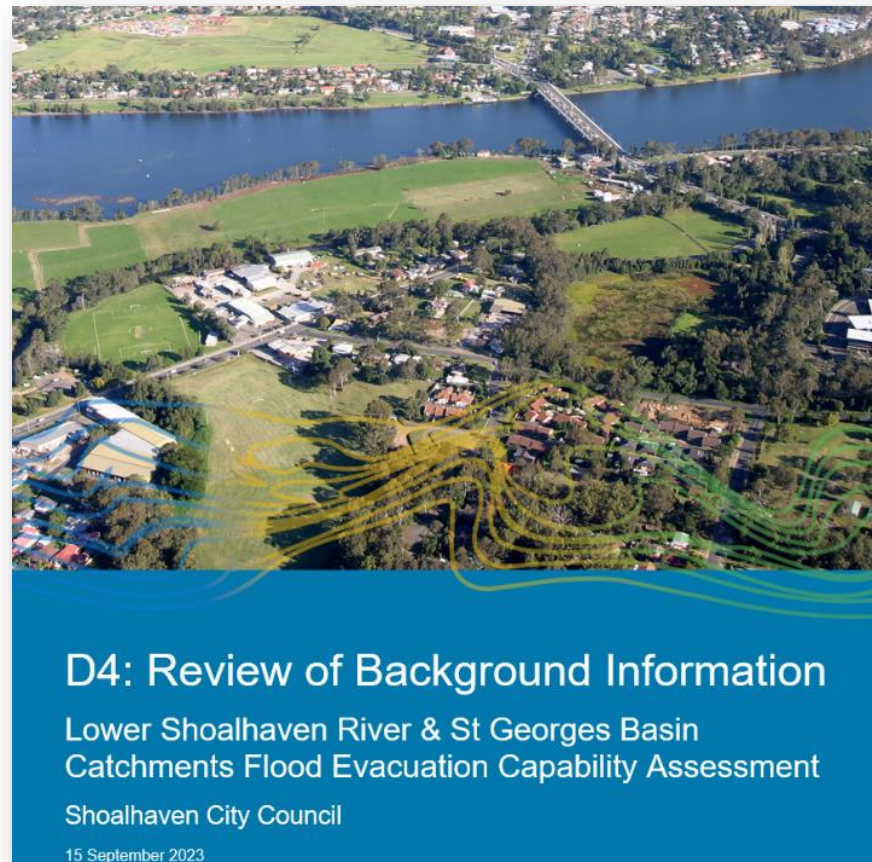
Deliverables and Progress

- Detailed Project Plan ✓




Deliverables and Progress

- Background information review ✓



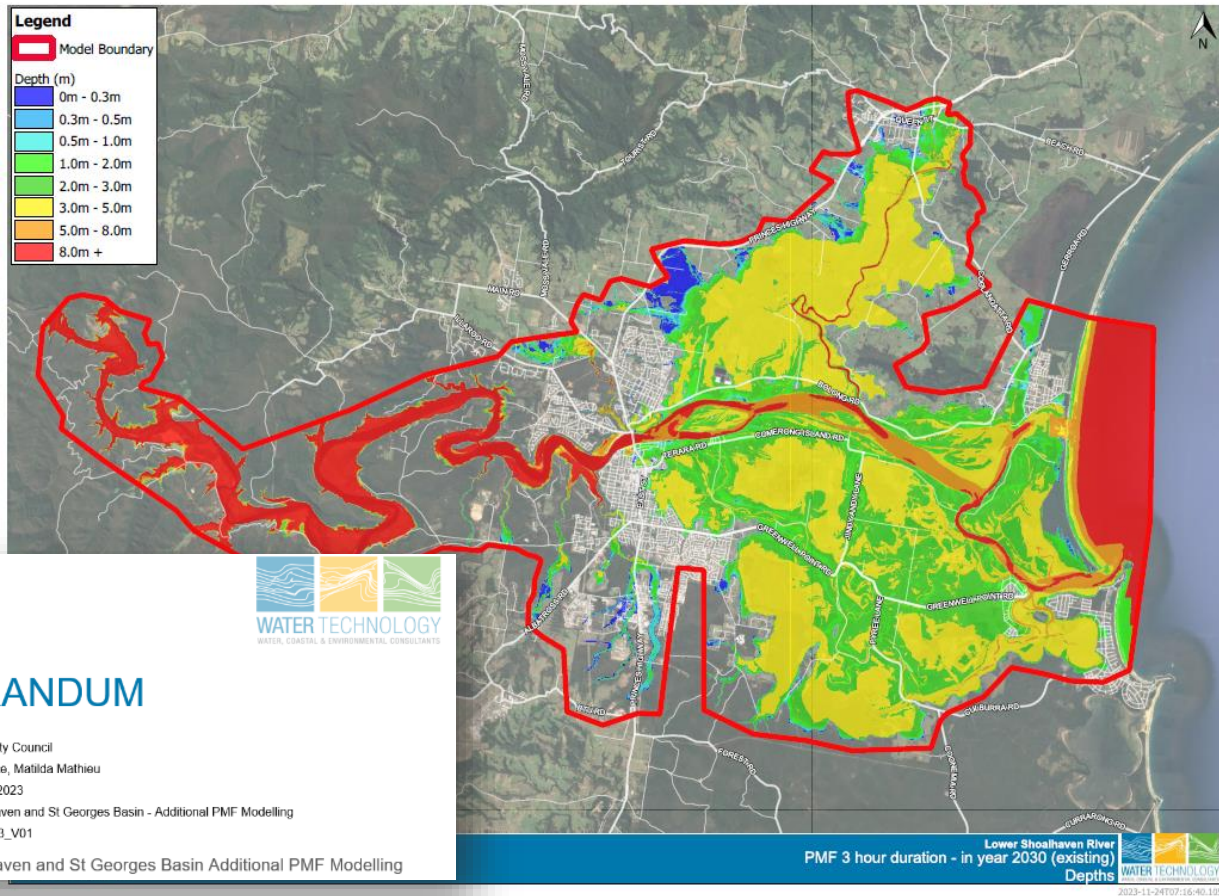
Deliverables and Progress

- Communication and Stakeholder Engagement Plan ✓

| Increasing impact on the decision  | | | | | |
|--|--|--|--|--|---|
| Public participation goal (what are we trying to achieve) | Inform | Consult | Involve | Collaborate | Empower |
| | To provide the public with balanced and objective information to help them understand the problem, alternatives and/or solutions | To obtain public feedback on alternatives and/or decisions | To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered | To partner with the public in each aspect of the decision including the development of alternatives and identification of the preferred solution | To place the final decision-making in the hands of the public |
| Promise to the public | We will keep you informed | We will keep you informed, listen to and acknowledge concerns and provide feedback on how public input influenced the decision | We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision | We will work with you to formulate solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible | We will implement what you decide |

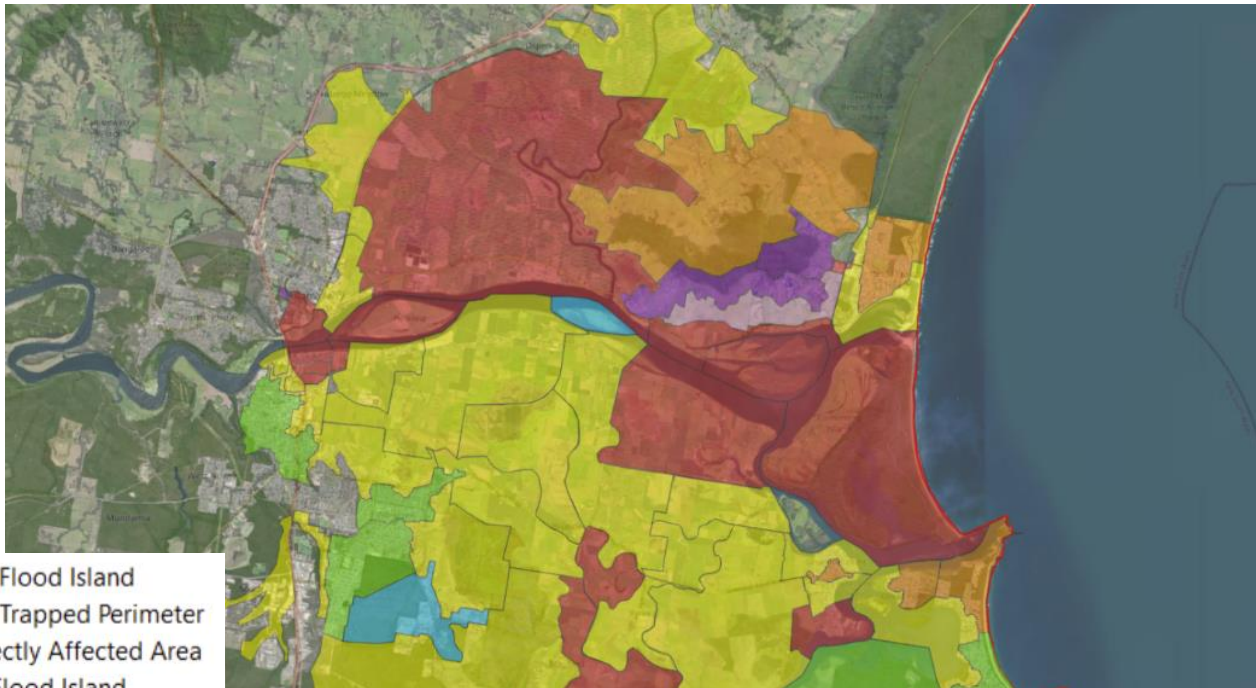
Deliverables and Progress

- Additional Flood Modelling ✓



Deliverables and Progress

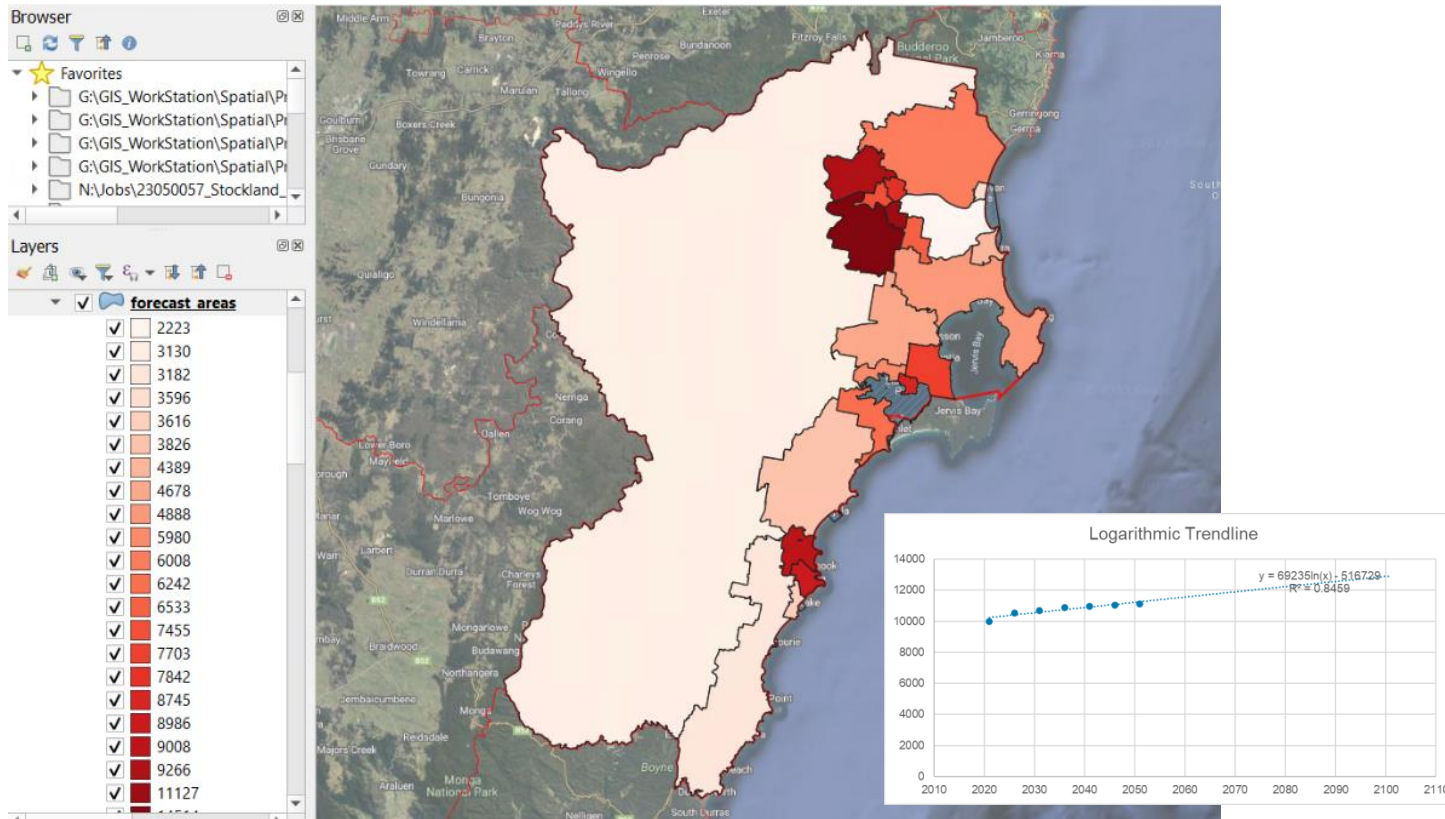
- Review of NSW SES Evacuation Sectors ✓



- High Flood Island
- High Trapped Perimeter
- Indirectly Affected Area
- Low Flood Island
- Low Trapped Perimeter
- Rising Road Access

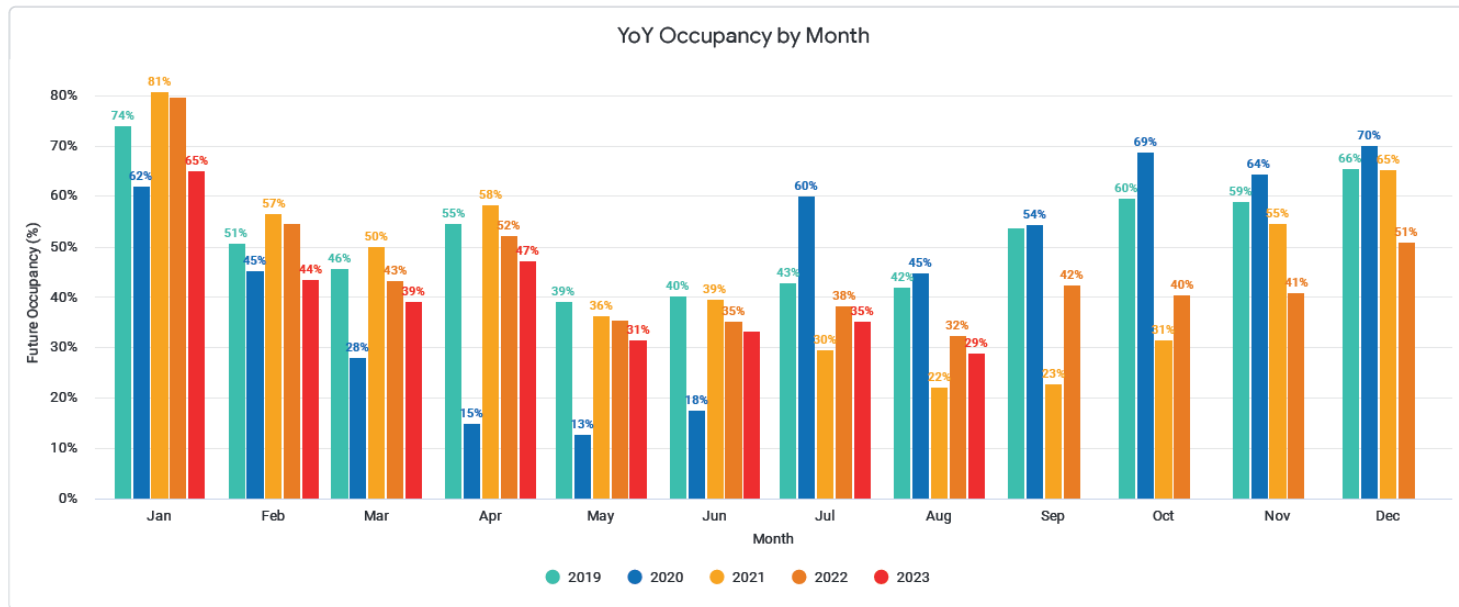
Deliverables and Progress

- Estimate of Evacuees Numbers ✓



Deliverables and Progress

- Estimate of Evacuees Numbers ✓



Upcoming milestones

- Flood evacuation capability assessment (work in progress)
- Flood evacuation triggers and constraints (work in progress)
- Potential mitigation options to improve evacuation capabilities (work in progress)
- Vulnerability of critical services
- Review of and recommendations to improve the existing flood forecast and warning systems (work in progress)
- Advice on land use planning considering evacuation capability

Upcoming milestones

- Review and update of flood emergency response classifications (work in progress)
- Proposed updates to the Shoalhaven DCP 2014
- Revised FECA and FEMP caravan park evacuation procedures as per DCP
- Investigation into the feasibility of raising Greenwell Point Road for improved flood evacuation
- Flood Evacuation Capability Assessment and Triggers Report



Flood Evacuation Capability Assessment and Triggers

Lower Shoalhaven River and St Georges Basin Catchments

Filippo.dallosso@watertech.com.au



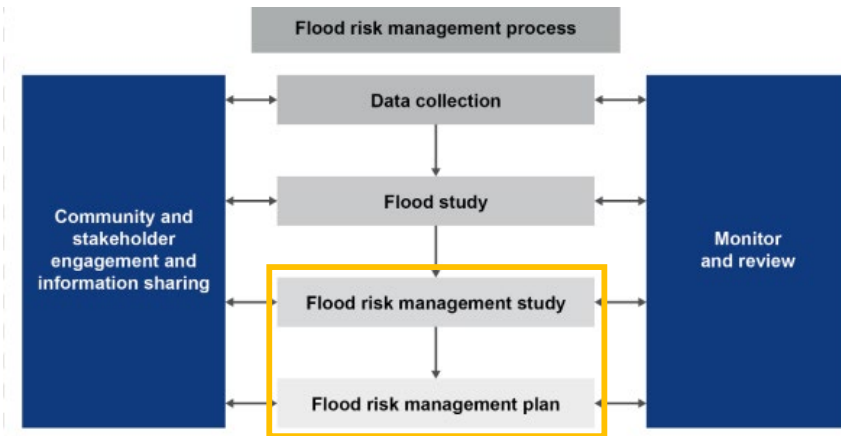
St Georges Basin Floodplain Risk Management Study and Plan

Presentation to the Central Floodplain Risk Management Committee

10 April 2024

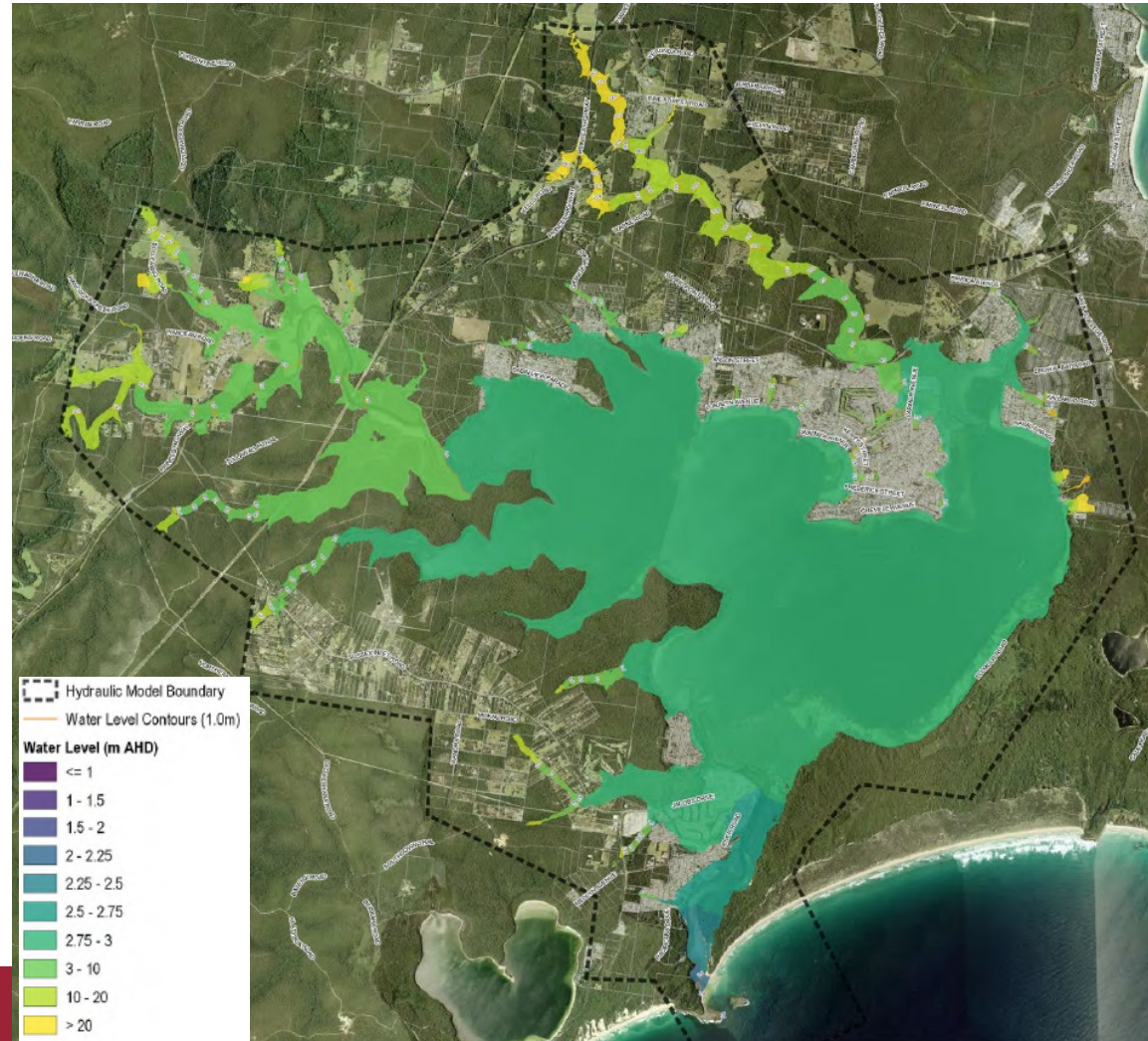
Project Overview

- Study commissioned to better inform management of flood risk in the study area.
- The study is being undertaken in accordance with the Flood Risk Management Manual, a State Government policy document.
- Flood Study was completed in 2022 and adopted in early 2023.
- This study will move through the FRM Study and FRM Plan phases of the framework
- The project has just commenced.
- This presentation will share the key stages of the project, and what outcomes are to be expected at each stage.



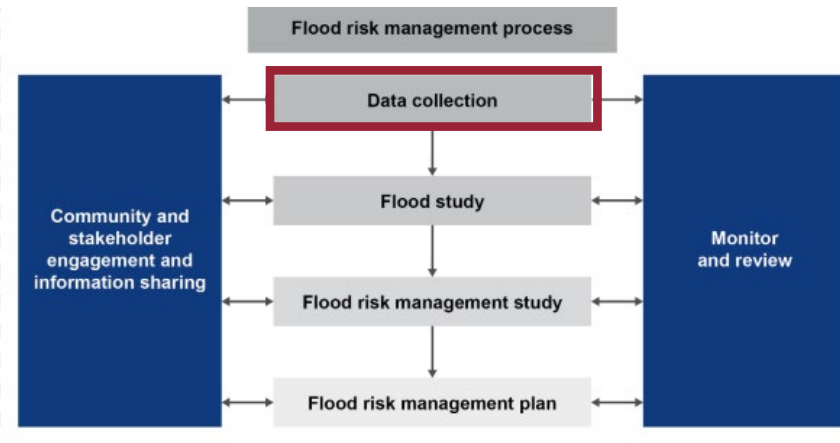
Study Area

- St Georges Basin has a catchment area of 360 km² of which 10% is covered by the basin itself.
- Flooding occurs through a number of mechanisms:
 - Local catchment flows driving creek and basin levels
 - Overland flow
 - Elevated ocean levels
 - Local wind conditions – the 1971 flood was reported to have a 0.5m water level difference across the basin



Data Collection & Model Updates

- Compilation and review of available data
- Incorporation of data from other studies:
 - Flood Evacuation Capability Assessment (FECA)
 - Floor level survey
- Updates to the hydraulic model:
 - Road levels

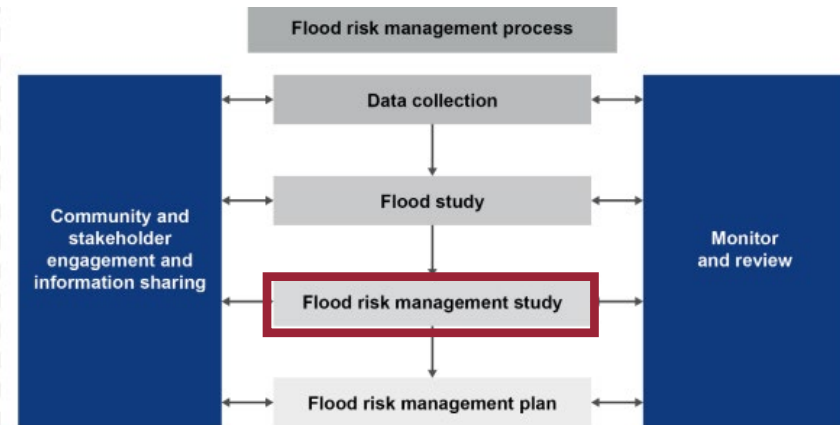


Key Outcomes

- *Flood models updated to be reflective of current site conditions, and to be fit for use in assessing management options.*

Floodplain Risk Management Study

- Building on the Flood Study, the Risk Management Study will develop and assess mitigation and management options to address the flood risks in the catchment.
- Will examine Structural, Emergency Response and Planning measures, informed by this, as well as prior and concurrent studies.



Key Outcomes

- *Development of a set of mitigation and management options to address the flood risk within the study area*
- *Assessment of these options to determine their feasibility*
- *Ranking of all options to determine which are most effective for risk management*

FECA Collaboration

- Core component of the FECA is the assessment of evacuation capacity deficiencies, and measures to address them.
- May include road raising, culvert upgrades, new roads, etc, which would be referred to this study for testing.
- Flood impacts (both positive and negative) will be assessed in the FRM Study.



Mitigation Options

- Structural
 - Assessment of new levees
 - Floodplain filling strategies
- Emergency Management
- Planning & Property



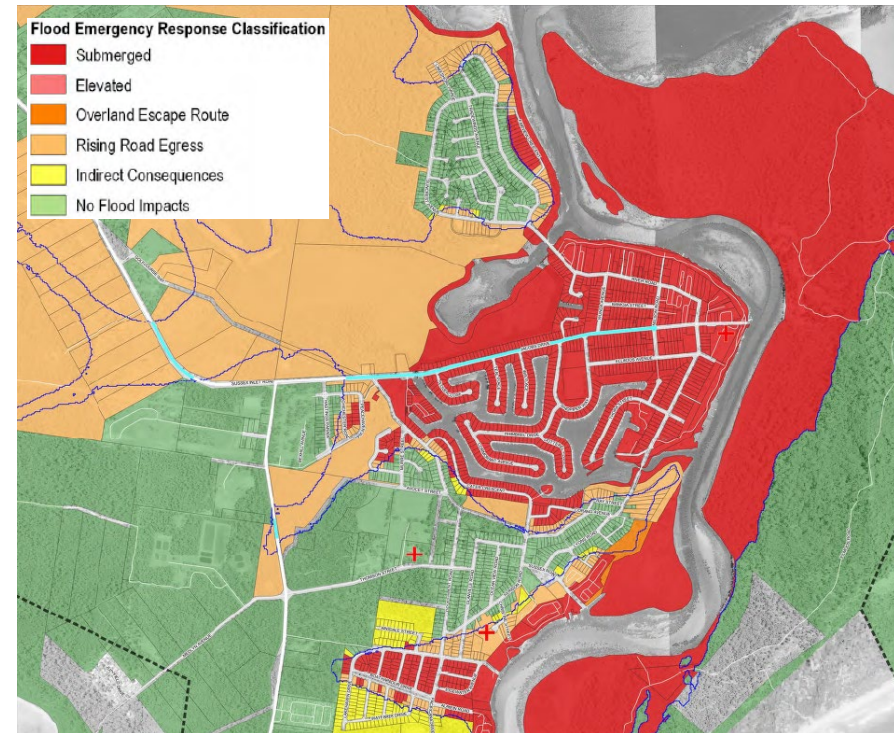
Mitigation Options

- Structural
- Emergency Management
 - FECA recommendations
 - Flood education
 - Flood warning
 - Information to Support Emergency Services
- Planning & Property



Mitigation Options

- Structural
- Emergency Management
 - Information to Support Emergency Services
 - Emergency Response Mapping
 - Road overtopping durations and locations
 - Updated flood mapping
 - Data handover to SES
- Planning & Property



Mitigation Options

- Structural
- Emergency Management
- Planning & Property
 - Voluntary house raising / purchase / land swap
 - Strategic cumulative fill policy for future development
 - Advice on planning and policy



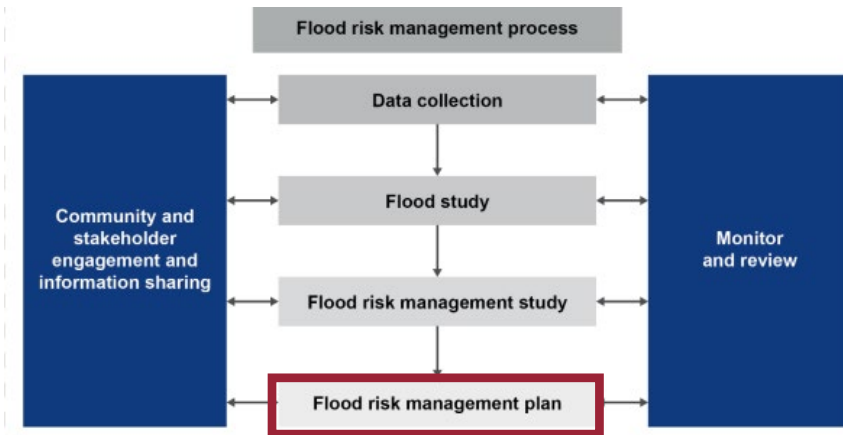
Mitigation Options

- Structural
- Emergency Management
- Planning & Property
 - Advice on planning and policy
 - Flood planning level and area
 - Review of current planning controls and policies
 - Advice on updates and revisions to plans and policies
 - Clarity and ease
 - Best practise
 - Consistency



Floodplain Risk Management Plan

- The Plan distils the findings and recommendations of the Study into a recommended implementation process for Council.

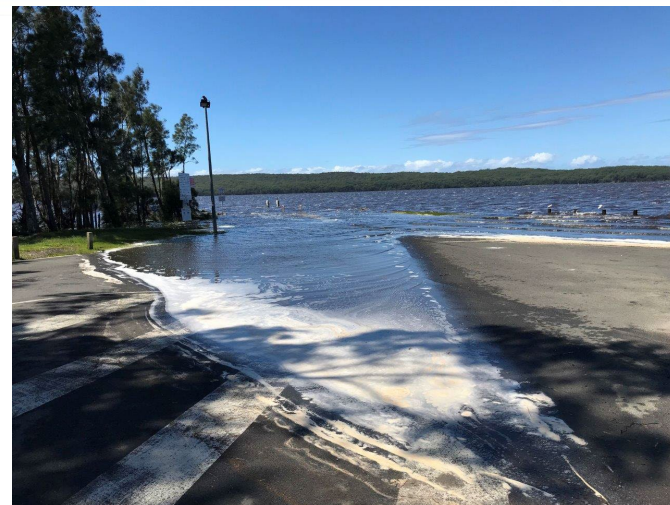
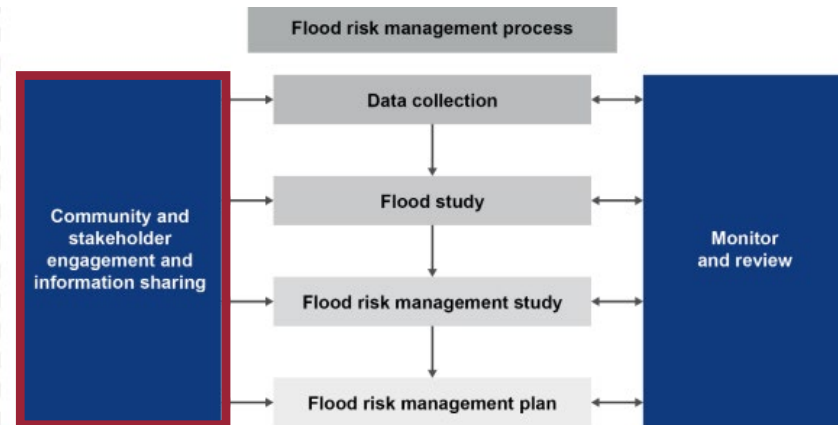


Key Outcomes

- A set of costed, feasible, and desired management options.
- A suggested order of implementation, based on costs, benefits and community feedback.

Engagement Overview

- Community and stakeholder engagement is a key goal of the study, and engagement tasks will be undertaken throughout:
 - Community feedback on flood management was sought as part of the flood study, so this data is already available. This study presents an opportunity for further community feedback.
 - Community will be consulted again during the public exhibition of draft documents.
 - SES is a key stakeholder and will be actively consulted throughout the project.
- Media releases and Council Get Involved webpage updates will be undertaken throughout the study.



Future Milestones

- Review and model updates (June '24)
- Review of climate change impacts (August '24)
- Assessment of management options (December '24)
- Draft report and Public Exhibition (March '25)
- Project Completion (June '25)



Questions?



